

What is Claimed:

1 1. A telephone answering machine that records and presents audio
2 messages which include dual-tone multi-frequency (DTMF) tones, comprising:

3 ¹⁶⁵⁰
 ^{col 6140} an answering machine module that receives the audio messages;

4 Fig 13 a DTMF tone decoder which converts the DTMF tones to text;

5 1320 a storage device; and

6 a processor that stores the received audio messages and the text
7 corresponding to the DTMF tones into the storage device.

1 2. A telephone answering machine according to claim 1, further
2 including text-to-speech conversion means which converts the text to speech signals,
3 wherein the processor stores the speech signals with the respective audio messages,
4 corresponding to the text, in the storage device.

1 3. A telephone answering machine according to claim 2, wherein the
2 processor is configured to store the speech signals in place of the DTMF tones in the
3 respective audio messages in the storage device.

1 4. A telephone answering machine according to claim 1, wherein the
2 DTMF tones are stored with the audio messages in the storage device and the
3 telephone answering machine further includes:

4 a user interface, coupled to the processor for providing user commands
5 to the processor; and

6 an interface to a public switched telephone network (PSTN); wherein the
7 processor is responsive to a command provided via the user interface to retrieve the

SECRET

8 DTMF tones from the storage device and to provide the DTMF tones to the PSTN
9 interface to initiate a telephone call.

1 5. A telephone answering machine according to claim 1, wherein the
2 DTMF tones are stored with the audio messages in the storage device and the
3 telephone answering machine further includes:

4 a user interface, coupled to the processor for providing user commands
5 to the processor;

6 an interface to a public switched telephone network (PSTN); and

7 a DTMF tone generator configured to translate text numbers into DTMF
8 tones and to provide the translated DTMF tones to the PSTN interface to initiate a
9 telephone call;

10 wherein the processor is responsive to a command provided via the user
11 interface to retrieve the text corresponding to the DTMF tones from the storage
12 device and to provide the retrieved text to the DTMF tone generator.

1 6. A telephone answering machine according to claim 1, further
2 including a display output port and an audio output port, whereby the stored audio
3 messages are provided to the audio output port and the respective stored text is
4 provided to the display output port for concurrent presentation to a user.

1 7. An integrated receiver/decoder (IRD) set-top box comprising,
2 video processing circuitry;
3 audio processing circuitry; and
4 a telecommunications unit, including.

5 an answering machine module that receives audio messages;

SECRET

6 a DTMF tone decoder which converts DTMF tones in the
7 received audio messages to text;

8 a storage device; and

9 a processor which stores the received audio messages and the text
10 corresponding to the DTMF tones into the storage device, replays the stored messages
11 using the audio processing circuitry and displays the text using the video processing
12 circuitry.

1 8. An IRD set-top box according to claim 7, wherein the
2 telecommunications unit further includes text-to-speech conversion means which
3 converts the text to speech signals, wherein the processor stores the speech signals
4 with the respective audio messages corresponding to the text in the storage device.

1 9. An IRD set-top box according to claim 8, wherein the processor
2 is configured to store the speech signals in place of the DTMF tones in the respective
3 audio messages in the storage device.

1 10. An IRD set-top box according to claim 7, wherein the DTMF
2 tones are stored with the audio messages in the storage device and the
3 telecommunications unit further includes:

4 a user interface, coupled to the processor for providing user commands
5 to the processor; and

6 an interface to a public switched telephone network (PSTN); wherein the
7 processor is responsive to a command provided via the user interface to retrieve the
8 DTMF tones from the storage device and to provide the DTMF tones to the PSTN
9 interface to initiate a telephone call.

1 11. An IRD set-top box according to claim 7, wherein the DTMF
2 tones are stored with the audio messages in the storage device and the telephone
3 answering machine further includes:

SECRET

4 a user interface, coupled to the processor for providing user commands
5 to the processor;

6 an interface to a public switched telephone network (PSTN); and

7 a DTMF tone generator configured to translate text numbers into DTMF
8 tones and to provide the translated DTMF tones to the PSTN interface to initiate a
9 telephone call;

10 wherein the processor is responsive to a command provided via the user
11 interface to retrieve the text corresponding to the DTMF tones from the storage
12 device and to provide the retrieved text to the DTMF tone generator.

1 12. An IRD set-top box according to claim 7, further including a
2 display output port for providing for display video signals received by the IRD set-top
3 box and an audio output port for presenting sound signals associated with the
4 displayed video signals, whereby the stored audio messages are provided to the audio
5 output port and the respective stored text is provided to the display output port for
6 concurrent presentation to a user.

1 13. A method for processing telephone audio messages that include
2 dual-tone multi-frequency (DTMF) tones, comprising the steps of:

3 receiving the telephone audio messages;

4 converting the DTMF tones to text; and

5 storing the received audio messages and the text corresponding to the
6 DTMF tones into a storage device.

1 14. A method according to claim 13, further including the steps of:

2 converting the text to speech signals; and

3 storing the speech signals with the respective audio messages
4 corresponding to the text in the storage device.

1 15. A method according to claim 14, wherein the step of storing the
2 speech signals with the respective messages includes the step of storing the speech
3 signals in place of the DTMF tones in the respective audio messages in the storage
4 device.

1 16. A method according to claim 13, further including the step of
2 initiating a telephone call by providing stored DTMF tones corresponding to one of
3 the received audio messages to a telecommunications network.

1 17. A method according to claim 13, further including the step of
2 converting the stored text corresponding to one of the received audio
3 messages to DTMF tones; and
4 initiating a telephone call by providing the converted DTMF tones to a
5 telecommunications network.

1 18. A method according to claim 13, further including the steps of:
2 providing the audio messages as an audio output signal; and
3 displaying the stored text corresponding to each audio message as the
4 respective audio message is provided.

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